

Soft Tissue Procedures in the National Health and Nutrition Examination Survey (NHANES) III

Procedure & Method Information

<i>Name of Procedure/Method</i>	Soft Tissue Procedures in the National Health and Nutrition Examination Survey (NHANES) III	<i>Abbreviation</i>	N/A
<i>Purpose</i>	To assess the prevalence of selected pathological conditions affecting the oral mucosa (i.e., soft tissue).		
<i>Year of Establishment</i>	N/A	<i>Type of Procedure/Method</i>	
<i>Developer(s)</i>	National Center for Health Statistics (NCHS), United States	<i>Oral Condition Category</i>	

Background Information

<i>Background Information</i>	<p>Due to the existence and broad range of several soft tissue-related diseases and disorders, in the National Health and Nutrition Examination Survey (NHANES) III, 1988-1994, the oral mucosa or soft tissue clinical assessment included only selected pathological conditions or lesions based on the frequency of occurrence, clinical significance, and ability to be diagnosed by clinical methods alone.</p> <p>These lesions or conditions are (1) actinic keratosis, (2) acute necrotizing ulcerative gingivitis, (3) amalgam tattoo, (4) angular cheilitis, (5) candidiasis (i.e., acute pseudomembranous and acute erythematous), (6) cheek/lip biting, (7) denture-related lesions (i.e., denture hyperplasia, denture stomatitis, and denture ulcer), (8) erythroplakia, (9) frictional white lesion, (10) galvanic white lesion, (11) gingival hyperplasia, (12) herpes labialis, (13) herpetic gingivostomatitis, (14) leukoplakia, (15) lichen planus, (16) mucocoele, (17) nevus, (18) nicotinic stomatitis, (19) papillomas/warts, (20) recurrent aphthous ulceration, (21) smokeless tobacco lesion, (22) tongue lesions (i.e., fissured tongue, geographic tongue, glossitis [nonspecific], hairy tongue, and median rhomboid glossitis), (23) tumor (nonspecific) lesions, and (24) ulcer (nonspecific) lesions. There was also an optional category for unknown lesions.</p> <p>For children and adolescents, the clinical exam also gave special consideration to detecting soft tissue conditions resulting from the use of smokeless tobacco and associated with cancer, precancer, conditions predisposed to cancer, denture wearing, and tobacco use for adults. In addition to the clinical assessment, a household questionnaire was used to collect information about risk factors such as the use of smokeless tobacco, smoking tobacco, and alcohol.</p> <p>The findings for the NHANES III soft tissue assessment can also be compared with the findings from the National Institute of Dental Research (NIDR) National Survey of Oral Health in U.S. School Children, 1986-87.</p>
<i>Changes Over Time</i>	N/A

Procedure Method

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The soft tissue exam was conducted on sample persons 2 years old and older. As outlined in NHANES III, the clinical procedure for the soft tissue assessment is as follows:

NHANES III Oral Mucosal Tissue Examination Procedure

Using two mouth mirrors and two 2x2 gauze squares, the examination procedure follows a systematic assessment of the lips; labial mucosa and sulcus; commissures, buccal mucosa, and sulcus; gingiva and alveolar ridges, tongue; floor of the mouth; and hard and soft palates.

1. Begin examination by observing the lips with the mouth both closed and open. Note the color, texture, and any surface abnormalities of the upper and lower vermilion borders.
2. With the mouth partially open, visually examine the labial mucosa and sulcus of:
 - a. the maxillary vestibule and frenulum, and
 - b. the mandibular vestibule.

Observe the color and any swelling or other abnormalities of the vestibular mucosa and gingiva.

3. Using the two mouth mirrors as retractors and with the mouth open wide, examine first the right, then the left buccal mucosa extending from the labial commissures and back to the anterior tonsillar pillar. Note any change in pigmentation, color, texture, mobility, and other abnormalities of the mucosa; make sure that the commissures are examined carefully and are not covered by the mouth mirrors during retraction of the cheek.

4. Next, examine the gingiva and alveolar ridges (processes).

- a. Buccal and Labial Aspects

Start with the right maxillary posterior gingiva and alveolar ridge and move around the arch to the left posterior gingiva. Continue with the left mandibular posterior gingiva and alveolar ridge and move around the arch to the right posterior gingiva.

- b. Palatal and Lingual Aspects

Same as above except on the palatal for the maxillary (right to left) examination and on the lingual for the mandibular (left to right) examination.

5. With the tongue at rest and mouth partially open, inspect the dorsum of the tongue for any swelling, ulceration, coating, or variation in size, color, or texture. Also note any change in the pattern of the papillae covering the surface of the tongue and examine the top and the tip of the tongue. The subject should then protrude the tongue, and the examiner should note any abnormality of mobility. With the aid of mouth mirrors, inspect the margins of the tongue. Grasping the tip of the tongue with a piece of gauze will assist full protrusion and will aid examination of the margins. Then observe the ventral surface.
6. With the tongue still elevated, inspect the floor of the mouth for swellings or other abnormalities.
7. With the mouth wide open and the subject's head tilted backward, gently depress the base of the tongue with a mouth mirror. First inspect the hard and then the soft palate.

Mucosal or facial tissues that seem to be abnormal should be palpated.

Source: National Center for Health Statistics. National Health and Nutrition Examination Survey III, 1988-1994. Washington, DC: U.S. Government Printing Office.

In regard to recording the findings, only one lesion or condition per subject was recorded on a form. If more than one condition or lesion was observed, then an additional form was used. The recording form consisted of three major sections: an oral cavity diagram for specifying lesion location, a section for the clinical diagnosis, and a section for the lesion clinical description. There was also a space for indicating whether the lesion had been smeared. Smears were taken for the following conditions: angular cheilitis, candidiasis, denture stomatitis, erythroplakia, leukoplakia, lichen planus, and median rhomboid glossitis.

Other procedural guidelines for the soft tissue assessment are provided below.

A. Location

On the diagram provided, identify the topographic location and mark the nearest circle(s) in the appropriate areas. If the condition is generalized, mark the circle labeled "generalized."

B. Clinical Diagnosis

All conditions will be recorded either as a definitive diagnosis or as unknown.

1. When a clinical diagnosis can be made, then check the appropriate lesion or write in the name of the lesion in the space following "other" if it is not one of the listed lesions but you are sure of the diagnosis.

2. If a clinical diagnosis cannot be made, then check "unknown."

C. Clinical Description

For the following lesions the clinical description portion of the form will be completed: candidiasis, erythroplakia, hairy leukoplakia, leukoplakia, lichen planus, tumors, ulcers, and unknowns.

1. Presentation: Mark whether the lesion is single, multifocal, or generalized.

2. Size

a. Single lesions

Record length and width in millimeters for flat lesions. For elevated lesions also record the height.

b. Multifocal lesions

Record size of largest single lesion as described above.

c. Generalized conditions

Size need not be specified.

3. Surface Morphology

Check the most appropriate surface morphology. If the lesion has multiple components, record the appearance of the predominant component. If the morphology is different from those listed on the form, describe the morphology under "other."

4. Colors

Specify the predominant color. If the lesion is a color other than those on the form, specify the predominant color under "other." If no single color predominates, check as many colors as apply.

5. Consistency

For lesions that can be palpated, check the appropriate consistency: soft, firm, fluid-filled, or other. If the consistency is different from those listed, specify under "other."

6. Pain

Ask the subject whether the lesion in question is painful at the present time, and record the response.

7. Duration

Ask about the duration of the lesion in question and mark the form accordingly. If the duration is not known, leave this item blank.

8. Prior History

Inquire if the subject has had a similar lesion in the past and specify "yes," "no," or "unknown" in the space provided.

9. Comments

If the examiner wants the recorder to record additional information, it should be recorded in the comments section. Only the lower 1/2 inch of the second page should be used to write comments.

Source: National Center for Health Statistics. National Health and Nutrition Examination Survey III, 1988-1994. Washington, DC: U.S. Government Printing Office.

Established Modifications

N/A

*Federal Survey
Modifications*

N/A

References

References

Textbooks, Manuals, and the Internet:

National Center for Health Statistics. National Health and Nutrition Examination Survey III, 1988-1994. Washington, DC: U.S. Government Printing Office.

Validity

Reliability

Listing of Publications with Surveys &

Surveys & Studies

United States Surveys & Studies:

National Center for Health Statistics. National Health and Nutrition Examination Survey III, 1988-1994. Washington, DC: U.S. Government Printing Office.